

erally the kind with seeds that float long distances in the wind, such as poplar and birch, or those having fruits especially liked by birds, such as the bird cherry, which is very widely distributed. These show first on account of getting started first. The pine and the other trees may come in later owing to their being seeded later, or owing to the later advent of conditions favorable to their germination and growth. It may happen in the case of burnt-over pine lands that pine seed is distributed over it the first year after it is burned, but owing to there being no protection from the sun, the young seedlings of white and Norway pine, which are very delicate, are destroyed. After a young growth of poplars has appeared, the pine seed may find just the right conditions for growth for a few years, and finally get ahead of the poplars and crowd them out, while in the meantime it is being much improved by the presence of the poplars which grow rapidly and force the pines to make a tall growth. On the other hand, however, the poplars, birches and other trees and shrubs, and even weeds, may sometimes make so strong a growth as to kill out the young pine seedlings if they are not sufficiently well established at the time the mature growth is cut.

AN ENGLISH EDITION OF SCHIMPER'S PLANT
GEOGRAPHY.

For several years it has been known that an English edition of Schimper's 'Plant Geography' was in preparation, the work having been undertaken by Professor William R. Fisher, with the advice and consent of the author. 'The untimely death of the author in 1901, shortly after the translation was begun, robbed the English edition of modifications and improvements which he had intended to make,' so the text of the book is exactly that of the German edition of 1898. The book in its English dress is characterized by the beautiful typography, paper and binding of the Clarendon Press of Oxford, and is a thick octavo of 869 pages (as against 894 in the German edition), and four maps. The only changes noticed are the omissions of the key-page to the plate of rock vegetation (Fig. 487), and the new plate for Map IV. at the end of the volume. The latter is much coarser in the Oxford map, and while it is much more distinct, it is considerably less accurate

on the whole, than the German map. The translation has been revised and edited by Dr. Percy Groom and Professor Balfour, and Dr. Groom has added a sympathetic sketch of Schimper's life work.

CHARLES E. BESSEY.

THE UNIVERSITY OF NEBRASKA.

SCIENTIFIC NOTES AND NEWS.

At the annual meeting of the Royal Astronomical Society on February 12, Ambassador Choate received the society's gold medal on behalf of Professor George E. Hale, of the Yerkes Observatory.

MCGILL UNIVERSITY has conferred the degree of D.Sc. on Professor D. P. Penhallow, professor of botany at the university, and on John A. Low Waddell, a consulting engineer of Kansas City.

LORD RAYLEIGH has been created, by the German Emperor, a foreign Knight of the Prussian Order Pour le Mérite for sciences and arts.

MR. F. E. BEDDARD, F.R.S., of the London Zoological Gardens, has been elected a corresponding member of the Imperial Bohemian Academy of Sciences.

THE following have accepted positions on the permanent staff of the Station for Experimental Evolution of the Carnegie Institution, at Cold Spring Harbor: Professor C. B. Davenport, who will serve as director; Mr. Frank E. Lutz, who will make quantitative studies in animal variation; Mr. George H. Shull, whose work will be largely in plant breeding and the study of mutations in nature; and Miss Anna M. Lutz, who will serve as recorder and cytologist. The plans of the new building are now in the hands of the architects, Messrs. Kirby, Petit and Green, of New York City, and construction will commence as soon as the frost is out of the ground, so that the building may be in use next summer.

DR. CHARLES J. CHAMBERLAIN, of the Department of Botany of the University of Chicago, has received from the Botanical Society of America a grant to defray the expenses of a trip to Jalapa, Mexico, for the

purpose of studying cycads. Assistant Professor Bradley M. Davis, of the same department, has received an appointment to a Carnegie table at the Zoological Station, Naples, for the spring of 1904.

Nature states that the Tanganyika committee (Professor Ray Lankester, Sir John Kirk, Sir W. Thiselton-Dyer, Mr. Boulenger and Dr. Sclater) has determined to send out another naturalist for the further investigation of the 'Tanganyika problem,' and Mr. W. A. Cunningham, of Christ's College, Cambridge, has been appointed for this purpose. Mr. Cunningham will leave for Tanganyika (*viâ* Chinde and Zomba) in March, and will pay special attention to the lacustrine flora of the lake, of which as yet little is known, but will not neglect other subjects relating to the lake basin.

DR. EDUARD ZELLER, emeritus professor of philosophy in the University of Berlin, celebrated his ninetieth birthday on January 22. Emperor William presented him with a portrait and an autograph letter.

PROFESSOR AUGUST WEISMANN's seventieth birthday was celebrated in Freiburg on January 17, when, as we learn from *Nature*, a large and representative gathering assembled to do him honor. A bust by Kowazik, of Frankfort, subscribed for by biologists in various parts of the world, was presented in the name of the subscribers by Dr. H. E. Ziegler, professor of zoology at Jena; it is to be placed in the zoological institute of the university. A special number of the *Zoologische Jahrbücher*, containing papers by various naturalists, was presented by Professor J. W. Spengel, professor of zoology at Giessen, and from the Grand Duke of Baden Professor Weismann received the cross and star of Bertold I.

DR. ADOLPH FRANCK, of Berlin, known for his contributions to chemical agriculture, celebrated his seventieth birthday on January 20.

DR. JOSEPH JASTROW, professor of psychology and logic at the University of Wisconsin, has sailed for Europe to be absent until the autumn.

It is said that Dr. Nicholas Senn, of Chicago, will have charge of the red cross work of the Japanese army.

A GRANT of \$500 was given this year by the Rockefeller Institute of Medical Research to Dr. A. S. Warthin, professor of pathology in the University of Michigan, for his researches on the etiology of the anemias. The grant has been used for the establishment of a fellowship in pathology, to which Mr. H. Woltmann has been appointed.

MR. W. SAVILLE-KENT will shortly leave England to investigate and advise towards the further development of the pearl, shell and other fisheries pertaining to certain Polynesian Island properties.

It is reported that M. Curie has declined the cross of the Legion of Honor offered him by the French government, because it has not also been offered to Mme. Curie.

PROFESSOR W. F. BARRETT has been elected president of the Society for Psychical Research, succeeding Sir Oliver Lodge.

DR. HERMANN M. BIGGS, of New York City, gave, February 15, one of the lectures on tuberculosis before the Henry Phipps Institute of Philadelphia, his subject being 'The Administrative Control of Tuberculosis.'

At Trinity College, President David Starr Jordan will lecture on February 19, on 'Modern University Tendencies,' and on February 26, Professor Henry Fairfield Osborn, on 'The Evolution of the Horse.'

MR. FRANK CHAPMAN, of the American Museum of Natural History, gave a lecture, on January 24, before the Audubon Society at Sherry's, New York City, his subject being 'Travels of a Bird Lover.'

PROFESSOR ELWOOD MEAD, expert in charge of irrigation investigations for the United States Department of Agriculture, who also holds the chair of the institutions and practice of irrigation in the University of California, has left Washington, D. C., for California, where he will deliver his annual course of lectures on the 'Organization of the Irrigation Industry.'

UNDER the auspices of the West India Committee, London, Dr. John S. Flett read a

paper on February 9, on 'The Volcanic Eruptions in the West Indies'; on March 8, Sir Frederick Manson will read a paper on 'Tropical Diseases.'

THE prizes in the gift of the *Journal of Tropical Medicine* for prize essays on subjects connected with tropical diseases have been awarded as follows: The Belilios prize of £10, presented by the Hon. E. R. Belilios, C.M.G., for the best article on 'The system of drainage and sewerage best suited for tropical climates,' has been awarded to Captain J. W. Cornwall and Major F. Smith. The Lady MacGregor prize of £10, presented by Lady MacGregor, for the best article on 'A critical examination of the practical value of anti-typhoid inoculation,' has been awarded to Major F. Smith. The Sivewright prize of £10, presented by Sir James Sivewright, for the best essay on 'Intestinal affections in warm climates,' was not awarded.

JOSEPH PRIESTLEY, the discoverer of oxygen, died at Northumberland, Pa., February 6, 1804. On February 7, 1904, the Unitarian Club of Washington held a meeting to commemorate the centenary of that event. The speakers were F. W. Clarke, on Priestley as a discoverer; Rev. U. G. B. Pierce, who discussed Priestley's religious career, and the Rev. Edward Everett Hale, who spoke of Priestley's connection with America.

DR. DAVID DUNCAN, having been entrusted by the late Mr. Herbert Spencer with the writing of his biography, will be obliged to persons who may possess letters from him of value if they will kindly lend them to him for the purpose of such biography. All letters addressed to Dr. D. Duncan, care of H. R. Tedder, Esq., secretary, the Athenæum, Pall-mall, London, S. W., will be carefully preserved and returned in due course to their owners.

DR. CHARLES EMERSON BEECHER, professor of historical geology at Yale University and a member of the governing board of the Sheffield Scientific School, died suddenly from heart-disease on February 14.

MR. W. B. POWELL died at Mount Vernon, New York, on February 6, at the age of sixty-

seven years. Mr. Powell was for many years superintendent of schools in Illinois and occupied this position at Washington, D. C., from 1885-1900, where he introduced many reforms. He was a brother of J. W. Powell, the late eminent anthropologist.

THERE will be on March 1 a civil service examination to fill the position of pharmacologist in the Bureau of Plant and Animal Industry, U. S. Department of Agriculture, at a salary of \$800 a year. On March 2 and 3 there will be an examination for miscellaneous computer in the U. S. Naval Observatory, the salary of the position amounting to from \$800 to \$1,000 a year. On March 16 and 23 there will be examinations for the position of aid in the National Museum in the Division of Fishes and in the Division of Birds' Eggs, with salaries of \$600 and \$540 a year, respectively.

MR. SAMUEL H. SCUDDER has given to the Boston Society of Natural History his private library of nearly eight thousand pamphlets and volumes. This addition makes the society's collection of entomological works one of the foremost in the country.

THE New York Evening *Post* states that Professor J. Laurence Laughlin, of the University of Chicago, has been authorized by a Chicago business firm to offer four prizes for the best essays on topics relating to commerce and industry. The first prize will be \$1,000, the second \$500, the third \$300, and the fourth \$150, and any person who has received the degree of bachelor of arts from an American college since 1893 is eligible to compete. The essays are to be judged by Professor Laughlin; Professor Clark, of Columbia University; Professor Adams, of the University of Michigan; Dr. Carroll D. Wright, of Washington, and Horace White, of New York.

At the ordinary quarterly *comitia* of the London Royal College of Physicians, held on January 30, the President, Sir William Church, announced that Dr. Horace Dobell, of Dorset, had presented a sum of £500 in cumulative consols to the college for the promotion of original research into the ultimate origin, evolution and life history of bacilli

and other pathogenetic microorganisms. The conditions are that the president and censors of the college shall select a lecturer once in every two years, who shall give a record of original researches on the above subject, made by himself and others, and that he shall receive a fee of £50 for so doing. These lectures are to be continued biennially, as long as a sufficient amount of the £500 and its accumulated interest remains. The first lecture will be delivered during the year 1904.

At the recent meeting of the Society for Psychical Research, it was announced that the sum of \$30,000 had been collected for a scholarship, which it was hoped would be increased to \$40,000. The English society now numbers 832 members, and the American Society 530 members.

THE Philadelphia Neurological Society celebrated its twentieth anniversary on January 27 by a dinner at University Club. Speeches were made by Dr. S. Weir Mitchell, Dr. E. C. Spitzka, Dr. George Lincoln Walton, Dr. Wharton Sinkler and Dr. Charles K. Mills.

THE annual meeting of the American Institute of Mining Engineers, which was to have been held in Baltimore from February 16 to 20, has been called in Atlantic City, N. J., owing to the Baltimore fire.

A CONGRESS for experimental psychology is to be held at Giessen, beginning on April 20.

THE tenth Congress of Polish Physicians and Scientific Men will be held at Lemberg, Austrian Poland, on July 20-24, 1904. Professor E. Machek is chairman, and Professor W. Sieradzki is secretary of the committee of arrangements.

THE British parliamentary committee on physical deterioration is now holding sittings. Evidence has been given by Dr. D. J. Cunningham, professor of anatomy at the University of Edinburgh and chairman of the anthropometric committee of the British Association, by Sir Lauder Brunton, M.D., F.R.S., Mrs. H. G. Close, Mr. J. B. Atkins, London editor of the *Manchester Guardian*, Dr. Edward Malins, president of the Obstetrical Society and others.

A PETITION is being extensively signed in Great Britain in support of the bill for the adoption of the metric weights and measures which will be introduced in the house of lords by Lord Belhaven, and seconded by Lord Kelvin.

AN industrial and agricultural exposition is to be held at Nantes during the present year, beginning on May 5 and ending on September 22. The exposition is to be international in character and is to comprise four sections—agriculture, industry, marine and fine arts.

THE Davenport Academy of Sciences gave during January and February a course of seven lectures as follows: 'Some Interesting Features of Insect Life,' by Dr. L. O. Howard, Division of Entomology, Washington, D. C.; 'Protective Coloration among Animals,' by Professor C. C. Nutting, University of Iowa; 'Alamogorda, A Problem of the Desert,' by Professor Thomas H. Macbride, University of Iowa; 'Sanitary Engineering,' by Professor Charles S. Magowan, University of Iowa; 'Man in the Tropics,' by Professor Bohumil Shimek, University of Iowa; 'The Geology and Scenery of the Pipestone Region,' by Professor Samuel Calvin, University of Iowa.

THE U. S. Geological Survey has published a paper on 'Chemical composition of igneous rocks, expressed by means of diagrams, with reference to rock classification on a quantitative chemico-mineralogical basis,' by Professor J. P. Iddings, of the University of Chicago. The materials erupted from the depths of the earth vary greatly in composition. Silica, alumina, iron, magnesia, lime, soda and potash are present in considerable amounts in most eruptive rocks, and other substances often occur in notable quantities. The mineralogical composition and, through that, various other features of igneous rocks, depend in large degree upon the chemical composition of the fluid magmas of which they represent the solid forms. It is, however, difficult, even for the specialist in this science, to perceive readily the significance of the differences in composition between two rocks when presented in the form of long chemical analyses; hence petrographers have for many years sought to express in the form

of some diagram the principal facts of each analysis, so that they may at once appeal to the eye. Professor Iddings describes the various kinds of diagrams that have been used, finally explaining the kind which seems to him the most useful. These diagrams express the relations of all the leading constituents of an analysis. Professor Iddings has also devised a plan for the comparison, upon charts, of diagrams representing separate analyses, so that the full range of composition found for known igneous rocks is at once illustrated. This publication presents these charts, which are printed in four colors and accompanied by descriptive text. This graphic representation brings out many facts concerning the composition of the earth's magmas. The fact that there are no well-defined chemical groups of rocks, but rather a continuous series with no natural dividing lines, is clearly illustrated. The author discusses the relations exhibited by the charts, with particular reference to rock classification.

UNIVERSITY AND EDUCATIONAL NEWS.

COLUMBIA UNIVERSITY, the Massachusetts Institute of Technology, the Lawrence Scientific School of Harvard University and the Sheffield Scientific School of Yale University will unite in a summer school of mining to be held in Colorado. The conduct of the summer school is to be in the hands of an executive committee, consisting of Dr. John Hays Hammond, representing Yale University; Professor Robert H. Richards, of the Massachusetts Institute of Technology; Professor Henry L. Smyth, of Harvard University, and Professor Henry S. Munroe, of Columbia University. The last named has been appointed director of the school for the first year, and he will have under him a corps of competent instructors drawn from the several institutions. Mr. George Crocker, through Professor John Hays Hammond, has offered to pay the cost of the school this summer, and has placed \$12,000 for this purpose in the hands of Mr. Hammond and the presidents of the four institutions named, who will act as trustees of the fund.

THE new science and administration building of Colorado College, at Colorado Springs, known as Palmer Hall, will be formally opened with various celebrations during the latter part of the month. The dedicatory address will be delivered on February 23, by Dr. David Starr Jordan; on February 22 addresses will be delivered by Dr. C. R. Van Hise, Dr. S. L. Bigelow, Dr. C. E. Bessey and Dr. Henry Crew. The new building has been erected at an expense of \$280,000, and contains ample laboratory facilities for the scientific department, a museum, etc.

A NUMBER of influential heads of colleges and professors at Oxford have issued a leaflet urging that candidates for honors in mathematics and natural science shall be allowed to substitute for the entrance examination in Greek, mathematics, a science or a modern language.

HENRY S. WILLIAMS, since 1892 professor of geology in Yale University, where he was called from Cornell University, has accepted a call to the head of the department of geology at Cornell.

DR. W. R. WHITEHORNE, formerly professor of physics and chemistry at Muhlenberg College, Allentown, Pa., has been appointed instructor in physics at Lehigh University.

DR. WALDEMAR KOCH, associate in pharmacology in the University of Chicago, has resigned to accept the assistant professorship of pharmacology and physiological chemistry in the University of Missouri.

DR. GEORGE BYRON GORDON has been appointed instructor in anthropology in the University of Pennsylvania.

DR. W. S. BAYLEY has resigned the chair of mineralogy and geology at Colby College which he has held since 1888.

PROFESSOR CHARLES H. HASKINS, of the mathematical department of the Sheffield Scientific School, Yale University, has resigned because of impaired health.

DR. BONNHÖFER, of Königsberg, has been elected professor of psychiatry and director of the Insane Asylum at Heidelberg.